

Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 (Currently Amended): A laminated perpendicular magnetic recording medium, comprising a non-magnetic substrate and at least a pair of polycrystalline, vertically stacked, spaced-apart perpendicular magnetic layers supported thereon, wherein each of said magnetic layers has ~~substantially~~ the same preferred out-of-plane crystal growth orientation and the ~~grains~~ grain boundaries of at least two of said magnetic layers are ~~vertically uncorrelated~~ not in vertical alignment with each other.

2 (Original): The medium as claim 1, wherein said at least one pair of stacked magnetic layers are vertically spaced apart by a non-magnetic, amorphous or nano-crystalline spacer layer.

3 (Currently Amended): The medium as in claim 2, wherein said magnetic layers are comprised of ~~substantially~~ the same material.

4 (Original): The medium as in claim 2, wherein said magnetic layers are comprised of different materials.

5 (Currently Amended): The medium as in claim 2, wherein the lattice parameters of said magnetic layers are ~~substantially~~ the same.

6 (Original): The medium as in claim 2, wherein the lattice parameters of said magnetic layers are different.

7 (Withdrawn): The medium as in claim 2, wherein each of said magnetic layers is comprised of an *hcp* material having a <0002> preferred out-of-plane growth orientation and a [0002] lattice parameter.

8 (Withdrawn): The medium as in claim 7, wherein each of said magnetic layers comprises a layer of a Co-based alloy material having a thickness from about 3 to about 20 nm and said non-magnetic spacer layer comprises a layer of an amorphous or nano-crystalline Ti-based alloy material having a thickness from about 1 to about 20 nm.

9 (Withdrawn-Currently Amended): The medium as in claim 7, wherein each of said magnetic layers is comprised of ~~substantially the same or a different~~ *hcp* <0002> material and the [0002] lattice parameter of each of said layers is ~~substantially the same or different~~.

10 (Original): The medium as in claim 2, wherein each of said magnetic layers is comprised of an *fcc* material having a <111> preferred out-of-plane growth orientation and a [111] lattice parameter.

11 (Original): The medium as in claim 10, wherein each of said magnetic layers comprises a multi-layer material selected from the group consisting of Co/Pt, Co/Pd, Fe/Pt, and Fe/Pd having a thickness from about 3 to about 20 nm, and said non-magnetic spacer layer comprises a layer of an amorphous or nano-crystalline Ti-based alloy material having a thickness from about 1 to about 20 nm.

12 (Currently Amended): The medium as in claim 10, wherein each of said magnetic layers is comprised of ~~substantially the same or a different~~ *fcc* <111> material and the [111] lattice parameter of each of said layers is ~~substantially the same or different~~.

13 (Original): The medium as in claim 1, further comprising a seed layer in contact with a lower surface of at least one of said magnetic layers, said seed layer comprising a material having a lowest interfacial energy with said at least one magnetic layer when the latter has the desired preferred out-of-plane crystal growth orientation.

14 (Original): The medium as in claim 13, where said seed layer comprises a layer of an amorphous material selected from the group consisting of Ti-based alloys, FeCo alloys, FeNi alloys, CoNi alloys, and InSnO (ITO) materials and having a thickness from about 1 to about 400 nm or a layer of a polycrystalline material selected from the group consisting of Ru, Ti, Ag, Au, Cu, and alloys comprised of a *fcc* or *hcp* material and having a thickness from about 1 to about 20 nm.

15 (Original): The medium as in claim 13, further comprising a soft magnetic underlayer in contact with a lower surface of a lowermost seed layer.

16 (Currently Amended): A method of fabricating a laminated perpendicular magnetic recording medium, comprising steps of:

- (a) providing a non-magnetic substrate having a surface; and
- (b) forming at least a pair of polycrystalline, vertically stacked, spaced-apart, perpendicular magnetic layers over said surface, such that each of said magnetic layers has ~~substantially~~ the same preferred out-of-plane crystal growth orientation and the ~~grains~~ grain boundaries of at least two of said layers are ~~vertically uncorrelated~~ not in vertical alignment with each other.

17 (Original): The method according to claim 16, wherein:

step (b) comprises forming a non-magnetic, amorphous or nano-crystalline spacer layer between vertically adjacent ones of said magnetic layers.

18 (Currently Amended): The method according to claim 17, wherein:

step (b) comprises forming said magnetic layers as comprised of ~~substantially~~ the same material ~~or of different materials~~, and the lattice parameters of said magnetic layers are ~~substantially~~ the same ~~or are different~~.

19 (Withdrawn): The method according to claim 18, wherein:

step (b) comprises forming each of said magnetic layers as comprised of an *hcp* material having a $\langle 0002 \rangle$ preferred out-of-plane growth orientation and a $[0002]$ lattice parameter.

20 (Withdrawn): The method according to claim 19, wherein:

step (b) comprises forming each of said magnetic layers as comprised of a layer of a Co-based alloy material having a thickness from about 3 to about 20 nm and forming said non-magnetic spacer layer as comprised of a layer of an amorphous or nano-crystalline Ti-based alloy material having a thickness from about 1 to about 20 nm.

21 (Original): The method according to claim 18, wherein:

step (b) comprises forming each of said magnetic layers as comprised of an *fcc* material having a $\langle 111 \rangle$ preferred out-of-plane growth orientation and a $[111]$ lattice parameter.

22 (Original): The method according to claim 21, wherein:

step (b) comprises forming each of said magnetic layers as comprised of a multilayer material selected from the group consisting of Co/Pt, Co/Pd, Fe/Pt, and Fe/Pd having a thickness from about 3 to about 20 nm, and forming said non-magnetic spacer layer as comprised of a layer of an amorphous or nano-crystalline Ti-based alloy material having a thickness from about 1 to about 20 nm.

23 (Original): The method according to claim 16, wherein:

step (b) further comprises forming a seed layer in contact with a lower surface of at least one of said magnetic layers, said seed layer comprising a material having a lowest interfacial energy with said at least one magnetic layer for when the latter has the desired preferred out-of-plane crystal growth orientation.

24 (Original): The method according to claim 23, wherein:

step (b) comprises forming said seed layer as comprised of a layer of an amorphous material selected from the group consisting of Ti-based alloys, FeCo alloys, FeNi alloys, CoNi alloys, and InSnO (ITO) materials and having a thickness from about 1 to about 400 nm or a layer of a polycrystalline material selected from the group consisting of Ru, Ti, Ag, Au, Cu, and alloys comprised of a *fcc* or *hcp* material and having a thickness from about 1 to about 20 nm.

25 (Original): The method according to claim 23, wherein:

step (b) still further comprises forming a soft magnetic underlayer in contact with a lower surface of a lowermost seed layer.